1: Conzemius M-4, 5 (1921) 1932
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287 PREPARATION OF TUNU CLOTH.—The tunu tree is cut down and deprived of its bark; the latter is then soaked in water for a few days, after which the sticky gum or milk adhering to it is scraped off. The bark is then dried in the sun and kept in the hut until the women find time to pound it into cloth. In this state it is called *kusni* by the Miskito, Twahka, and Panamaka, and *kuska* by the Ulwa. As it becomes hard and shrinks considerably, it has to be submerged in the neighboring stream for a short time before the pounding of it begins. The latter operation is performed on a small log[23] (M.: *tun-dusa*; S.: *lañlañ*) with the aid of a wooden mallet having the shape of a short thick club, into which longitudinal ridges have been made at the head part. This mallet is known by the names *kakka* and *para*, after the two small species of palm, from the stem of which it is made.[24] The Miskito living around Brus Lagoon and on the lower Rio Patuca also make use of the stem of a small fan-leafed palm which grows in that region and is known to Indians and foreigners by the name "palmetto." The bark extends gradually upon being pounded, and it becomes soft and flexible. After being washed and dried, it is ready for use, and has a browniah color. In Oceania the same process is employed and a similarly shaped mallet is used to manufacture the bark cloth, known by the name "tapa," but the tree of those regions is a species of Morus.

WHITE BARK CLOTH.—A similar cloth, but almost white in color and of superior quality, is obtained by the same process from the inner bark of a species of Ficus (S.: *yakuta*, *yakanta*) and likewise from the rubber tree (*Castilla* sp.). But in both cases the manufacture of the cloth is more laborious. The cloth from these two trees is known locally as "white tunu" (M.: *tunu pihni*; S.: *yakanta*, *tas-banna*); it [754] is used by the sorcerer in connection with incantations. For this purpose the sukya marks it with designs in black and red obtained with the aid of clay, charcoal, or vegetable juices.

Raveneau de Lussan (439) mentions the manufacture by the Miskito of clothing and covers from the "bastard palm"; the present writer ignores what kind of tree is meant thereby, as no part of any palm is utilized nowadays for such a purpose.

CERAMICS

323 Pottery making is rapidly becoming a lost art among the Sumu, owing to the introduction of iron and cheap tinware, while it is entirely unknown to the Miskito of the present day. The Sumu from Rio Bocay have attained some skill in making earthenware of different

[23] According to Exquemelin (Engl. edit.: 251) the Miskito were pounding their bark cloth upon stones around 1671.

[24] It is not uncommon that the plant, which furnishes the material, gives also the name of the tool.

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shapes and sizes for hauling water, storing food and intoxicants, and for cooking purposes.[48]

POTTERY OBJECTS.—The various kinds of pottery vessels used for cooking and for storing liquids are known by the general name *sumi* among the Miskito, and *suba* or *san suba* among the Sumu. Some of the large jars used in fermenting intoxicants reach 4 feet in height. Griddles are unknown to the Miskito; they are called *liwa* (T., P.) and *lawa* (U.). Jugs or water jars are known as *putisa* (M.) and *sutpanak* (S.); a small bowl, which is seen chiefly at the festivals, is called *ušikra* (M.), *sumai* (T., P.) or *ušikara* (U.). Most of these vessels, especially the larger ones, are slightly pointed at the base, so that they have to be placed in a cavity of the mud floor, or they are propped with stones to keep them upright. The fruit of the calabash tree served as an early model for the pottery vessels, and several types recall the shape of that fruit. Tobacco pipes (M.: *twako mina;* S.: *aka pan, aka pana*) are also made to the present day, while pottery whistles have been found in the old burial grounds.

MOLDING.—The making of the pottery is exclusively the work of the women. Potter's clay (M.: *slaubla;* S.: *sau*), noted for its good quality, may be hauled by the Indians from a great distance. The material is broken out of the ground with the aid of a strong, pointed stick. After being cleaned of all foreign particles it is mashed with the hands and mixed with water.[49] The clay is molded by hand, for the potter's wheel, like any other kind of wheel, was unknown in America in pre-Columbian days. Smaller vessels are shaped directly out of a lump of clay placed on a heavy wooden board upon which a large bijagua leaf has been placed; this leaf is continually turned round in the process of shaping.

In case a larger vessel is manufactured, the bottom portion is likewise shaped directly out of a lump of clay, and the walls are built up, not of one continuous coil, but of several, each succeeding one adding to the height of the pot. Old broken pottery vessels clearly show the coils by which they were built up.

When the desired height has been reached, the upper edge is neatly trimmed with the aid of the fragment of a calabash shell, wherein an indentation has been made, corresponding to the contour the vessel is to receive. When the latter is partly dried, it is polished with the aid of a smooth pebble.

FIRING.—After having been allowed to dry slowly in the shade for several days the ware is placed in a fire made on the ground in

[48] The present-day Miskito rely entirely on the more convenient and durable iron cooking pots for cooking purposes, but they still obtain, by way of trade from their Sumu neighbors, large clay vessels for the storing of mishla.

[49] Wickham (c: 207) mentions the Ulwa of Rio Escondido tempering the clay by mixture with a proportion of ashes from the bark of a certain forest tree, collected and burned for the purpose.

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the neighborhood of the hut, where it is left to burn slowly, until all the wood and coals have been consumed. Neither paint, glaze, nor plastic ornamentation is applied nowadays.

ANCIENT POTTERY VESSELS.—The pottery objects found in many parts of the Mosquito Coast, chiefly in old burial grounds, indicate a much greater skill in this art than that possessed by the present-day inhabitants of the country. Most of such ware is unpainted, but fine plastic ornamentation was applied to the knob handles and occasionally to the legs also. The designs represent chiefly heads of jaguars, alligators, turtles, and birds. Fragments of tripod vessels with legs modified into animal legs may also be found; sometimes these legs are hollow and contain clay balls as rattlers. In the shell mounds or kitchen middens near the sea fragments of pottery vessels with figurine handles have been discovered. A geometric motive, which is often found on old pottery vessels and on stonework, is the incised guilloche or rope pattern, which may have a curvilinear or an angular construction.

ANCIENT CLAY MASKS.—From the interior of the Mosquito Coast, probably the Sumu territory, the discovery of human heads, busts or entire figures, made of clay, has been reported. The material used for this purpose is said to have been mixed occasionally with gold dust. These objects are supposed to be the likenesses of chiefs or other prominent persons who had been buried at the spots where these finds were made. A number of these "masks" were brought to England from the interior of the Mosquito Coast about the year 1775, and eight of them have been described and depicted by Rogers (107). As these masks have their backs concaved in a cylindrical form, they were probably parts of sepulchral urns.

COTTON TEXTILES

CULTIVATION OF COTTON.—The art of weaving has not been mastered by the young generation, but cotton (*Gossypium* sp.; M.: *wahmuk;* S.: *wahmak*) is still cultivated in a desultory way. The bushes, which attain a height of from 8 to 12 feet, may be found in the neighborhood of almost every hut; they flower the whole year round, and at any time buds and open bolls may be found on the same plant.

A FEMALE OCCUPATION.—Dyeing and spinning cotton and weaving it into cloth is exclusively woman's work. Exquemelin (Fr. edit.: II, 269), who wrote during the second half of the seventeenth century, states that the women only spin the cotton and that the men do the weaving.

TYPES OF FABRICS.—The elder Sumu women still weave cotton into loin cloths (M.: *palpura;* T. and P.: *dŏih;* U.: *ani*), girdles or

wore tight cotton bands below the knees and above the ankles. Today 301
woven bands of glass beads are worn around the neck, wrists, and ankles. Straw hats are decorated with feathers and jaguar teeth (*Mosquito, Paya*).

Black paint is smeared over the body by the men (*Sumo, Mosquito,* 302
Paya) as a decoration and for protection from insects. Geometrical de- [751]
signs are drawn in red paint, mainly by the women. The *Sumo, Mosquito,* [53]
and *Paya* tattooed geometrical designs upon the face, arms, and breast. 304
The *Sumo* men made ornamental scars on their faces and chipped their teeth. All *Sumo* tribes except the *Bawikka* practiced head deformation. During infancy a folding flap of wood at the top of the cradle was tied firmly to the crown of the head.

TRANSPORTATION

Loads are carried with a band passing over the head (women) or 482
across the chest (men). Children are carried on the back in a blanket, [855]
the points of which are tied in front. [867]

The country has hunting trails but no roads. Most travel is done 501
in dugout canoes propelled with poles and broad-bladed paddles. Rafts are used for down-river traffic. Large keeled canoes, often equipped with a sail, are used at sea.

MANUFACTURES

Basketry.—Crude baskets, mainly of wickerwork, are made chiefly for 285
storage bins. Bark and silk grass fiber bags are very common. Bark fiber is used also to make tumplines, hammocks, and such.

Bark cloth.—Bark cloth is beaten out of ficus-tree bark with a grooved 287
wooden mallet.

Weaving.—Cotton is spun on a spindle, which has a whorl and is 286
rotated in a gourd. Coarse-textured but soft cotton cloth is woven on a two-beam loom. Thread was formerly dyed and designs were woven in the cloth. Sometimes feathers, particularly a fringe of white Muscovy duck down, were incorporated into the fabric.

Ceramics.—Pottery making has been described only from the *Sumo* 323
and *Paya*, although pottery was formerly made by all tribes. Women model small vessels out of a lump of clay but build up large ones with coils. They polish them with a pebble, dry them for several days, and fire them in the open. Pottery types include jars about 4 feet (1.3 m.) high, various types of jugs, water jars, small bowls, griddles, and tobacco pipes. All vessels have a convex base.

Miscellaneous manufactures.—Metates are still used by the *Paya* 415
and *Sumo*, and they have recently been adopted by the *Jicaque*, but the *Mosquito* are said no longer to use them. Metates are flat-topped boulders, which only rarely have a trimmed surface. Manos are round pebbles.